ARP001047 Allen
12-00214

DMP
Defiance Metal Products
944 BY PASS RD. • HEBER SPRINGS, ARKANSAS 72543
PH. (501) 362-1919 • FAX (501) 362-6160

30 November 2009

7377

RECEIVED
DEC - 1 2009
By VHH

Arkansas Department of Environmental Quality
Water Division
5301 North Shore Dr.
North Little Rock, AR 72218-5317

Attn: Mr. Allen Gilliam

Re: Semi Annual Reporting

Dear Mr. Gilliam

Attached you will find our report showing Defiance Metal Products (DMP) waste water effluent testing for the period represented from May 2009 through the beginning of November 2009. Also you will find attached a summary of all testing conducted during this time, both in-house and offsite. As you will note, during the month of August the average is slightly above the monthly average allowed. Our corrective action includes: utilizing our capability to segregate the effluent into a holding tank for testing with our AA spectrometer, making the necessary chemical adjustments and reprocessing as needed. Also, you will notice no in-house or offsite results for the month of September. Our AA unit had a gas supply problem that was finally resolved late in October.

Incorrect AA see e-mail in file.

Also, you will find attached a flow schematic for our waste treatment system.

Upon your review, if you should find anything which requires our attention please do not hesitate to call. We'll continue to strive to improve our processes and comply with all Federal, State and Local regulations.

Respectfully,

Tim Bartley
Facility Chemist
Defiance Metal Products

SEMI-ANNUAL REPORT FOR INDUSTRIAL USERS REGULATED BY 40CFR433

Use of this form is not an EPA/ADEQ requirement. Attn: Water Div/NPDES Pretreatment

(1) IDENTIFYING INFORMATION

A. LEGAL NAME & MAILING ADDRESS

Defiance Metal Products
944 By Pass Rd.
Heber Springs, AR 72543

B. FACILITY & LOCATION ADDRESS

Defiance Metal Products
944 By Pass Rd.
Heber Springs, AR 72543

C. FACILITY CONTACT: Tim Bartley TELEPHONE NUMBER: 501 362-1919 ext.5297 e-mail: tbartley@defiancemetal.com

(2) REPORTING PERIOD--FISCAL YEAR From to (Both Semi-Annual Reports must cover Fiscal Year)

A. MONTHS WHICH REPORTS ARE DUE

November & May

B. PERIOD COVERED BY THIS REPORT

FROM: May '09 TO: November '09

(3) DESCRIPTION OF OPERATION

A. REGULATED PROCESSES

CORE PROCESS(ES)

CHECK EACH APPLICABLE BLOCK

G Electroplating
G Electroless Plating
G Anodizing
X Coating
G Chemical Etching and Milling
G Printed Circuit Board Manufacture

ANCILLARY PROCESS(ES)*

LIST BELOW EACH PROCESS USED IN THE FACILITY

Cleaning

*SEE 40CFR433.10(a) FOR 40 DIFFERENT OPERATIONS

B. CHANGES: SUMMARIZE ANY CHANGES IN THE REGULATED PROCESSES SINCE THE LAST REPORT. ATTACH AN ADDITIONAL SHEET IF THE SPACE BELOW IS INADEQUATE. PROVIDE A NEW SCHEMATIC IF APPROPRIATE.

C. Number of Regular Employees at this Facility
185

D. [Reserved]

40CFR433 SEMI-ANNUAL REPORT CON'D FACILITY NAME: _____

(4) FLOW MEASUREMENT

INDIVIDUAL & TOTAL PROCESS FLOWS DISCHARGED TO POTW IN GALLONS PER DAY

Process	Average	Maximum	Type of Discharge
Regulated (Core &	8,000	12,000	Batch
Regulated (Cyanide)			
'403.6(e) Unregulated*			
'403.6(e) Dilute			
Cooling Water			
Sanitary	3,000	4,500	Continuous
Total Flow to POTW	11,000	16,500	**********

*"Unregulated" has a precise legal meaning; see 40CFR403.6(e).

(5) MEASUREMENT OF POLLUTANTS

A. TYPE OF TREATMENT SYSTEM

CHECK EACH APPLICABLE BLOCK

G Neutralization
X Chemical Precipitation and Sedimentation
G Chromium Reduction
G Cyanide Destruction
G Other _____
G None

B. COMMENTS ON TREATMENT SYSTEM

No longer using MRS (Metals Removal System), only chemical precipitation method in use.

C. THE INDUSTRIAL USER MUST PERFORM SAMPLING AND ANALYSIS OF THE EFFLUENT FROM ALL REGULATED PROCESSES--CORE & ANCILLARY--(AFTER TREATMENT, IF APPLICABLE). ATTACH THE LAB ANALYSIS WHICH SHOWS A MAXIMUM; TABULATE ALL THE ANALYTICAL DATA COLLECTED DURING THE REPORT PERIOD IN THE SPACE PROVIDED BELOW. ZERO CONCENTRATIONS ARE NOT ACCEPTABLE; LIST THE DETECTION LIMIT IF CONCENTRATION WAS BELOW DETECTION LIMIT.

MAY

Pollutant(mg/l)	Cd	Cr	Cu	Pb	Ni	Ag	Zn	CN	TTO*
Max for 1 day	0.11	2.77	3.38	0.69	3.98	0.43	2.61	1.20	2.13
Monthly Ave	0.07	1.71	2.07	0.43	2.38	0.24	1.48	0.65	--
Max Measured	< 0.004	< 0.007	0.065	< 0.04	0.8252	< 0.007	0.7393	< 0.01	--------
Ave Measured	--------	---------	———	--------	0.4756	--------	~~0.7393~~ 0.3933	ok --------	--------

*TTO analysis is not necessary if facility has submitted an approved Toxic Organic Management Plan (TOMP)

Sample Location Clarifier Effluent

Sample Type (Grab or Composite) Grab

Number of Samples and Frequency Collected Weekly (for Zinc)

40CFR136 Preservation and Analytical Methods Use: X Yes G No

40CFR433 SEMI-ANNUAL REPORT CON'D FACILITY NAME: _____

(4) FLOW MEASUREMENT

INDIVIDUAL & TOTAL PROCESS FLOWS DISCHARGED TO POTW IN GALLONS PER DAY

Process	Average	Maximum	Type of Discharge
Regulated (Core &	8,000	12,000	Batch
Regulated (Cyanide)			
'403.6(e) Unregulated*			
'403.6(e) Dilute			
Cooling Water			
Sanitary	3,000	4,500	Continuous
Total Flow to POTW	11,000	16,500	**********

*"Unregulated" has a precise legal meaning; see 40CFR403.6(e).

(5) MEASUREMENT OF POLLUTANTS

A. TYPE OF TREATMENT SYSTEM

CHECK EACH APPLICABLE BLOCK

G Neutralization
X Chemical Precipitation and Sedimentation
G Chromium Reduction
G Cyanide Destruction
G Other _____
G None

B. COMMENTS ON TREATMENT SYSTEM

No longer using MRS (Metals Removal System), only chemical precipitation method in use.

C. THE INDUSTRIAL USER MUST PERFORM SAMPLING AND ANALYSIS OF THE EFFLUENT FROM ALL REGULATED PROCESSES--CORE & ANCILLARY--(AFTER TREATMENT, IF APPLICABLE). ATTACH THE LAB ANALYSIS WHICH SHOWS A MAXIMUM; TABULATE ALL THE ANALYTICAL DATA COLLECTED DURING THE REPORT PERIOD IN THE SPACE PROVIDED BELOW. ZERO CONCENTRATIONS ARE NOT ACCEPTABLE; LIST THE DETECTION LIMIT IF CONCENTRATION WAS BELOW DETECTION LIMIT.

JUNE

Pollutant(mg/l)	Cd	Cr	Cu	Pb	Ni	Ag	Zn	CN	TTO*
Max for 1 day	0.11	2.77	3.38	0.69	3.98	0.43	2.61	1.20	2.13
Monthly Ave	0.07	1.71	2.07	0.43	2.38	0.24	1.48	0.65	--
Max Measured	< 0.004	< 0.007	0.065	< 0.04	1.2867	< 0.007	0.7820	< 0.01	--------
Ave Measured	--------	---------	———	--------	0.9594	--------	0.7353	--------	--------

*TTO analysis is not necessary if facility has submitted an approved Toxic Organic Management Plan (TOMP)

Sample Location Clarifier Effluent _____

Sample Type (Grab or Composite) Grab _____

Number of Samples and Frequency Collected Weekly (for Zinc) _____

40CFR136 Preservation and Analytical Methods Use: X Yes G No

40CFR433 SEMI-ANNUAL REPORT CON'D FACILITY NAME: _____

(4) FLOW MEASUREMENT

INDIVIDUAL & TOTAL PROCESS FLOWS DISCHARGED TO POTW IN GALLONS PER DAY

Process	Average	Maximum	Type of Discharge
Regulated (Core &	8,000	12,000	Batch
Regulated (Cyanide)			
'403.6(e) Unregulated*			
'403.6(e) Dilute			
Cooling Water			
Sanitary	3,000	4,500	Continuous
Total Flow to POTW	11,000	16,500	**********

*"Unregulated" has a precise legal meaning; see 40CFR403.6(e).

(5) MEASUREMENT OF POLLUTANTS

A. TYPE OF TREATMENT SYSTEM

CHECK EACH APPLICABLE BLOCK

G Neutralization
X Chemical Precipitation and Sedimentation
G Chromium Reduction
G Cyanide Destruction
G Other _____
G None

B. COMMENTS ON TREATMENT SYSTEM

No longer using MRS (Metals Removal System), only chemical precipitation method in use.

C. THE INDUSTRIAL USER MUST PERFORM SAMPLING AND ANALYSIS OF THE EFFLUENT FROM ALL REGULATED PROCESSES–CORE & ANCILLARY–(AFTER TREATMENT, IF APPLICABLE). ATTACH THE LAB ANALYSIS WHICH SHOWS A MAXIMUM; TABULATE ALL THE ANALYTICAL DATA COLLECTED DURING THE REPORT PERIOD IN THE SPACE PROVIDED BELOW. ZERO CONCENTRATIONS ARE NOT ACCEPTABLE; LIST THE DETECTION LIMIT IF CONCENTRATION WAS BELOW DETECTION LIMIT.

JULY

Pollutant(mg/l)	Cd	Cr	Cu	Pb	Ni	Ag	Zn	CN	TTO*
Max for 1 day	0.11	2.77	3.38	0.69	3.98	0.43	2.61	1.20	2.13
Monthly Ave	0.07	1.71	2.07	0.43	2.38	0.24	1.48	0.65	--
Max Measured	< 0.004	< 0.007	0.065	< 0.04	1.5085	< 0.007	0.7193	< 0.01	--------
Ave Measured	--------	---------	———	--------	1.2686	--------	0.4008	--------	--------

*TTO analysis is not necessary if facility has submitted an approved Toxic Organic Management Plan (TOMP)

Sample Location Clarifier Effluent _____

Sample Type (Grab or Composite) Grab _____

Number of Samples and Frequency Collected Weekly (for Zinc) _____

40CFR136 Preservation and Analytical Methods Use: X Yes G No

40CFR433 SEMI-ANNUAL REPORT CON'D FACILITY NAME: _____

(4) FLOW MEASUREMENT

INDIVIDUAL & TOTAL PROCESS FLOWS DISCHARGED TO POTW IN GALLONS PER DAY

Process	Average	Maximum	Type of Discharge
Regulated (Core &	8,000	12,000	Batch
Regulated (Cyanide)			
'403.6(e) Unregulated*			
'403.6(e) Dilute			
Cooling Water			
Sanitary	3,000	4,500	Continuous
Total Flow to POTW	11,000	16,500	**********

*"Unregulated" has a precise legal meaning; see 40CFR403.6(e).

(5) MEASUREMENT OF POLLUTANTS

A. TYPE OF TREATMENT SYSTEM

CHECK EACH APPLICABLE BLOCK

G Neutralization
X Chemical Precipitation and Sedimentation
G Chromium Reduction
G Cyanide Destruction
G Other _____
G None

B. COMMENTS ON TREATMENT SYSTEM

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AVG.

Pollutant(mg/l)	Cd	Cr	Cu	Pb	Ni	Ag	Zn	CN	TTO*
Max for 1 day	0.11	2.77	3.38	0.69	3.98	0.43	2.61	1.20	2.13
Monthly Ave	0.07	1.71	2.07	0.43	2.38	0.24	1.48	0.65	--
Max Measured	< 0.004	< 0.007	0.065	< 0.04	1.7063	< 0.007	1.7624	< 0.01	--------
Ave Measured	--------	---------	———	--------	1.2937	--------	1.4787	--------	--------

*TTO analysis is not necessary if facility has submitted an approved Toxic Organic Management Plan (TOMP)

Sample Location Clarifier Effluent _____

Sample Type (Grab or Composite) Grab _____

Number of Samples and Frequency Collected Weekly (for Zinc) _____

40CFR136 Preservation and Analytical Methods Use: X Yes G No

40CFR433 SEMI-ANNUAL REPORT CON'D FACILITY NAME: _____

(4) FLOW MEASUREMENT

INDIVIDUAL & TOTAL PROCESS FLOWS DISCHARGED TO POTW IN GALLONS PER DAY

Process	Average	Maximum	Type of Discharge
Regulated (Core &	8,000	12,000	Batch
Regulated (Cyanide)			
'403.6(e) Unregulated*			
'403.6(e) Dilute			
Cooling Water			
Sanitary	3,000	4,500	Continuous
Total Flow to POTW	11,000	16,500	**********

*"Unregulated" has a precise legal meaning; see 40CFR403.6(e).

(5) MEASUREMENT OF POLLUTANTS

A. TYPE OF TREATMENT SYSTEM

CHECK EACH APPLICABLE BLOCK

G Neutralization
X Chemical Precipitation and Sedimentation
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G Cyanide Destruction
G Other _____
G None

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Sept

Pollutant(mg/l)	Cd	Cr	Cu	Pb	Ni	Ag	Zn	CN	TTO*
Max for 1 day	0.11	2.77	3.38	0.69	3.98	0.43	2.61	1.20	2.13
Monthly Ave	0.07	1.71	2.07	0.43	2.38	0.24	1.48	0.65	--
Max Measured	< 0.004	< 0.007	0.065	< 0.04	—	< 0.007	—	< 0.01	--------
Ave Measured	--------	---------	—	--------	—	--------	—	--------	--------

*TTO analysis is not necessary if facility has submitted an approved Toxic Organic Management Plan (TOMP)

Sample Location Clarifier Effluent

Sample Type (Grab or Composite) Grab

Number of Samples and Frequency Collected Weekly (for Zinc)

40CFR136 Preservation and Analytical Methods Use: X Yes G No

40CFR433 SEMI-ANNUAL REPORT CON'D FACILITY NAME: _____

(4) FLOW MEASUREMENT

INDIVIDUAL & TOTAL PROCESS FLOWS DISCHARGED TO POTW IN GALLONS PER DAY

Process	Average	Maximum	Type of Discharge
Regulated (Core &	8,000	12,000	Batch
Regulated (Cyanide)			
'403.6(e) Unregulated*			
'403.6(e) Dilute			
Cooling Water			
Sanitary	3,000	4,500	Continuous
Total Flow to POTW	11,000	16,500	**********

*"Unregulated" has a precise legal meaning; see 40CFR403.6(e).

(5) MEASUREMENT OF POLLUTANTS

A. TYPE OF TREATMENT SYSTEM

CHECK EACH APPLICABLE BLOCK

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G Other _____
G None

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OCT.

Pollutant(mg/l)	Cd	Cr	Cu	Pb	Ni	Ag	Zn	CN	TTO*
Max for 1 day	0.11	2.77	3.38	0.69	3.98	0.43	2.61	1.20	2.13
Monthly Ave	0.07	1.71	2.07	0.43	2.38	0.24	1.48	0.65	--
Max Measured	< 0.004	< 0.007	0.065	< 0.04	0.580	< 0.007	0.7339	< 0.01	--------
Ave Measured	--------	---------	———	--------	———	--------	0.5274	--------	--------

*TTO analysis is not necessary if facility has submitted an approved Toxic Organic Management Plan (TOMP)

Sample Location Clarifier Effluent _____

Sample Type (Grab or Composite) Grab _____

Number of Samples and Frequency Collected Weekly (for Zinc) _____

40CFR136 Preservation and Analytical Methods Use: X Yes G No

40CFR433 SEMI-ANNUAL REPORT CON'D FACILITY NAME: _____

(4) FLOW MEASUREMENT

INDIVIDUAL & TOTAL PROCESS FLOWS DISCHARGED TO POTW IN GALLONS PER DAY

Process	Average	Maximum	Type of Discharge
Regulated (Core &	8,000	12,000	Batch
Regulated (Cyanide)			
'403.6(e) Unregulated*			
'403.6(e) Dilute			
Cooling Water			
Sanitary	3,000	4,500	Continuous
Total Flow to POTW	11,000	16,500	**********

*"Unregulated" has a precise legal meaning; see 40CFR403.6(e).

(5) MEASUREMENT OF POLLUTANTS

A. TYPE OF TREATMENT SYSTEM

CHECK EACH APPLICABLE BLOCK

G Neutralization
X Chemical Precipitation and Sedimentation
G Chromium Reduction
G Cyanide Destruction
G Other _____
G None

B. COMMENTS ON TREATMENT SYSTEM

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Nov

Pollutant(mg/l)	Cd	Cr	Cu	Pb	Ni	Ag	Zn	CN	TTO*
Max for 1 day	0.11	2.77	3.38	0.69	3.98	0.43	2.61	1.20	2.13
Monthly Ave	0.07	1.71	2.07	0.43	2.38	0.24	1.48	0.65	--
Max Measured	< 0.004	< 0.007	0.065	< 0.04	0.580	< 0.007	0.7339	< 0.01	--------
Ave Measured	--------	---------	—	--------	0.580	--------	0.5274	--------	--------

*TTO analysis is not necessary if facility has submitted an approved Toxic Organic Management Plan (TOMP)

Sample Location Clarifier Effluent _____

Sample Type (Grab or Composite) Grab _____

Number of Samples and Frequency Collected Weekly (for Zinc) _____

40CFR136 Preservation and Analytical Methods Use: X Yes G No

40CFR433 SEMI-ANNUAL REPORT CON'D FACILITY NAME: _____

(6) CERTIFICATION

A. [Reserved]

[Reserved]

B. CHECK ONE: G '433.11(e) TOXIC ORGANIC ANALYSIS ATTACHED X '433.12(a) TTO CERTIFICATION

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last semi-annual compliance report. I further certify that this facility is implementing the toxic organic management plan submitted to Arkansas Department of Environmental Quality.

DEVIN McSPADDEN
(Typed Name)

(Corporate Officer or authorized representative)

Date of Signature November 30, 2009

CORPORATE ACKNOWLEDGEMENT (Optional)

STATE OF ARKANSAS)
COUNTY OF _____)

Before me, the undersigned authority, on this day personally appeared _____ of _____, a corporation, known to me to be the person whose name is subscribed to the foregoing instrument(s), and acknowledged to me that he executed the same for purposes and considerations therein expressed, in the capacity therein stated and as the act and deed of said corporation.

Given under my hand and seal of office on this _____ day of _____, 200__.

_____
Notary Public in and for _____
County, Arkansas

My commission expires _____.

40CFR433 SEMI-ANNUAL REPORT CON'D FACILITY NAME: _____

(7) POLLUTION PREVENTION ACT OF 1990 [42 U.S.C. 13101 et seq.]

'6602 [42 U.S.C. 13101] Findings and Policy para (b) Policy.--*The Congress hereby declares it to be the national policy of the United States that pollution should be prevented or reduced at the source whenever feasible; pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner.*

The User may list any new or ongoing Pollution Prevention practices:

(8) GENERAL COMMENTS

Please note that the root cause for the spike in Zinc levels for the month of August was traced to tank dumps from "Clean and Wash" tanks #2 and #3. The cleaner concentrations tend to interfere with chemistry in the wastewater treatment process and cause an increase in treatment chemical usage to successfully achieve Zinc removal to regulatory levels. To avoid repeated spikes, all treatment chemical pumps will be set to increased levels prior to treating these tank dumps and close monitoring coupled with holding the effluent for reprocessing, if needed.

(9) SIGNATORY REQUIREMENTS [40CFR403.12(l)]

I certify under penalty of law that I have personally examined and am familiar with the information in this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

DEVIN McSPADDEN
NAME OF CORPORATE OFFICER OR AUTHORIZED REPRESENTATIVE

SIGNATURE

PLANT MANAGER
OFFICIAL TITLE

November 30, 2009
DATE SIGNED

Arkansas Testing Laboratories

3301 Langley Drive
Searcy, AR 72143
Off 501-268-6431
Fax 501-268-9314

*NPDES Wastewater Monitoring
*Water and Wastewater Analysis
*Concrete, Asphalt, and Aggregate Testing
*Geotechnical Testing
*Industrial and Construction Quality Control

CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

CLIENT: Defiance Metal Products

SAMPLE ID	SAMPLE MATRIX	SAMPLED BY: Tim BARTLEY				PARAMETERS										
EFF													PRESERVATIVES			
INF	W=H20												NaOH	HNO3		
CLAR	S=SLUDGE	DATE	TIME	Flow	Grab								Cyanide	RCRA Metals		
POND	D=SOIL															
BACKWASH	C=WELL															
CLAR. EFF.	W	11-4-09 x	1:30pm x		X								1-L-P	1-L-P		

# = number of bottles	2	Q, L, H = Quart, Liter, Half Gallon	P, G = Plastic, Glass

Relinquished by:	Date/Time	Received by:	Date/Time
[signature]	11-5-09 7:10AM		
Relinquished by:	Date/Time	Received by: [signature]	Date/Time 11-5-09 7:10am

Defiance Metal Products
Waste Water Effluent Test Results

Date	AR Testing Labs Effluent Nickel	AR Testing Labs Effluent Zinc	In-House AA Unit Effluent Nickel	In-House AA Unit Effluent Zinc	
5/5/2009	N/A	N/A	0.1114	0.2056	May Avg. Zinc
5/13/2009	N/A	N/A	0.8252	0.1417	0.3933 ok
5/19/2009	N/A	N/A	N/A	0.4864	
5/28/2009	N/A	N/A	0.4901	0.7393	
6/1/2009	N/A	N/A	0.6836	0.6420	June Avg. Zinc
6/17/2009	N/A	N/A	0.9079	0.9820	0.7353
6/30/2009	N/A	N/A	1.2867	0.5820	
7/13/2009	N/A	N/A	1.5085	0.0823	July Avg. Zinc
7/23/2009	N/A	N/A	1.0286	0.7193	0.4008
8/3/2009	N/A	N/A	0.8811	1.2349	Aug. Avg. Zinc
8/20/2009	N/A	N/A	1.7063	1.7624	1.4987
Sept. 2009	N/A	N/A	N/A	N/A	
10/30/2009	N/A	N/A	N/A	0.2621	
11/4/2009	0.580	0.330	N/A	0.5183	Nov. Avg. Zinc
11/11/2009	N/A	N/A	N/A	0.7339	0.5274

Arkansas Testing Laboratories
3301 Langley Dr · Searcy, AR 72143 (501) 268-6431 f(501) 268-9314

NPDES Wastewater Monitoring
Water and Wastewater Analysis
Concrete, Asphalt, and Aggregate Testing
Geotechnical Testing
Industrial and Construction Quality Control

DEFIANCE METAL PRODUCTS

Collection Date / Time: November 4, 2009 1:30 PM

Collection Place: **Clarifier / Effluent**

Collected By: T. Bartley

WATER ANALYSIS

Parameter	Date / Time Analyzed	Results	Unit	Analyst	Spike %	Rel %	Method
Total Metals							
Cyanide	11/15 10:45 AM	**< 0.01**	mg/l	BET	103.0	0.00	SM 4500 CN-E
Mercury	11/12 12:47 PM	**0.00024**	mg/l	270	79.6	0.89	EPA 245.7
Arsenic	11/09 9:00 PM	**< 0.05**	mg/l	270	112.0	2.13	EPA 3010A, 6010B
Barium	11/09 9:00 PM	**< 0.002**	mg/l	270	103.0	2.78	EPA 3010A, 6010B
Cadmium	11/09 9:00 PM	**< 0.004**	mg/l	270	105.0	1.40	EPA 3010A, 6010B
Chromium	11/09 9:00 PM	**< 0.007**	mg/l	270	108.0	1.43	EPA 3010A, 6010B
Lead	11/09 9:00 PM	**< 0.04**	mg/l	270	103.0	2.93	EPA 3010A, 6010B
Selenium	11/09 9:00 PM	**< 0.07**	mg/l	270	100.0	3.84	EPA 3010A, 6010B
Silver	11/09 9:00 PM	**< 0.007**	mg/l	270	95.5	3.65	EPA 3010A, 6010B
Nickel	11/23 3:29 PM	**0.580**	mg/l	270	100.0	2.78	EPA 3010A, 6010B
Zinc	11/23 3:29 PM	**0.330**	mg/l	270	99.0	3.97	EPA 3010A, 6010B
Copper	11/09 9:00 PM	**0.065**	mg/l	270	99.9	0.58	EPA 3010A, 6010B

Quality Assurance: All Parameters include 10% duplication studies by random selection. The following equipment is checked and calibrated daily: pH meter, balance, incubators, water baths, drying oven and sterilizing apparatus. Ammonia Nitrogen and Oil & Grease Analysis include duplication and spike studies at a rate of at least 10%.

Notes: Samples iced at collection. Preserved with H_2S0_4 to pH_2: Oil & Grease, Ammonia, COD

Neville Adams, Manager